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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,490	10/04/2006	Lothar Zipfel	05129-00124-US	2525
23416 7590 09/03/2009 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			EXAMINER ZEMEL, IRINA SOPHIA	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 09/03/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/580,490

**Applicant(s)**

ZIPFEL, LOTHAR

**Examiner**

Irina S. Zemel

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 11-23 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SE-US)  
Paper No(s)/Mail Date 5-24-2006  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The clause "measured in the vapor phase of the blowing agent" is unclear as it does not specify how it is measured, i.e., at which conditions it is measured since any volatile substance will have some vapor phase at almost any conditions.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11 and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0483573 to Daikin Industries, Limited, (hereinafter "Daikin").

Daikin discloses composition comprising mixtures of q difluoroethylene (R 152a) and a tetrafluoroethylene (R 134) in molar proportions from 0/100 to 100/0. See Table 2. Since the claims do not positively require the presence of any additional components

other than auxiliaries and additives (disclosed on page 4, lines 26-39, for example) the disclosed compositions clearly meet all of the limitations of the claimed compositions.

All claims contains a preamble limitation of intended use of the composition as a blowing agent mixture. This limitation is given weight only to the extent that the composition disclosed in the reference is capable of being used such. The disclosed composition is inherently capable for the claimed use because the claimed composition is believed to be identical to the composition disclosed in the reference. Therefore, the preamble limitation is anticipated by the reference. The burden is shifted to the applicant to provide convincing factual evidence to the contrary.

Claims 11,15-17, 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,276,063 to Smith et al., (hereinafter "Smith").

Smith discloses foamed polystyrene and a process for obtaining foamed polystyrene which process comprises the steps of extrusion foaming a polystyrene composition comprising polystyrene and various additives, using a blowing agent mixture of difluoroethylene and ethanol. See, for example, illustrative example 3.

The invention as claimed thus, is fully anticipated by the disclosure of Smith.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11- 17, 19, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 3930594 to Gefinex Jackson GMBH, (hereinafter "Gefinex") in combination with Smith..

Gefinex discloses blowing agent mixtures that comprise a fluorinated hydrocarbons, such as chlorofluorocarbon (and 1,2 difluoroethylene is discloses as possible fluorinated blowing agent in column 1, line 37) and an inert gas such as nitrogen, which can be present in the mixture in the amount of as low as 0.1 %. The reference further expressly discloses extrusion foaming polystyrene composition by using the disclosed blowing agent mixture. The reference does not disclose additives, however, it is the examiners position that polystyrene foams are normally extrusion foamed in the process of conventional additives used for their known functions. See Smith as discussed above.

Therefore, the invention as claimed would have been obvious from the combined disclosure of the cited references, and choosing amounts of relative blowing agents from expressly disclosed ranges would have been obvious with reasonable expectation of success, absent showing of unexpected results that can be attributed to the specifically claimed amounts of respective components of the blowing mixture. It is noted that no comparative results are present on the record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/  
Primary Examiner, Art Unit 1796

Irina S. Zemel  
Primary Examiner  
Art Unit 1796

ISZ